

WHAT IS CLAIMED IS:

1. A magneto-optical recording medium comprising at least a first magnetic layer, a second magnetic layer and a third magnetic layer, which are layered in this order,

the first magnetic layer being formed of a perpendicularly magnetized film having a relatively small wall coercivity and a relatively large wall mobility compared with the third magnetic layer in vicinity of a predetermined temperature,

the magneto-optical recording medium satisfying conditions

$$T_{c2} < T_{comp1} < T_{c1} \text{ and}$$

$$T_{c2} < T_{comp1} < T_{c3}$$

where T_{comp1} is a compensation temperature of the first magnetic layer, T_{c1} , T_{c2} and T_{c3} are Curie temperatures of the first, second and third magnetic layers, respectively.

2. The magneto-optical recording medium as set forth in claim 1,

wherein the compensation temperature T_{comp1} of the first magnetic layer satisfies a condition

$$160^{\circ}\text{C} \leq T_{comp1} \leq 260^{\circ}\text{C}.$$

3. The magneto-optical recording medium as set forth in claim 1,

wherein the wall coercivity of the first magnetic layer is not higher than 32 kA/m.

4. The magneto-optical recording medium as set forth in claim 1,

wherein the magneto-optical recording medium satisfies a condition

$$40^{\circ}\text{C} \leq T_{c2} \leq T_{comp1} - 30^{\circ}\text{C}$$

where T_{comp1} is a compensation temperature of the first magnetic layer and T_{c2} is a Curie temperature of the second magnetic layer.

5. The magneto-optical recording medium as set forth in claim 1,

wherein the magneto-optical recording medium satisfies a condition

$$-20^{\circ}\text{C} \leq T_{comp3} \leq T_{c3}$$

where T_{comp3} is a compensation temperature of the third magnetic layer and T_{c3} is a Curie temperature of the third magnetic layer.

6. The magneto-optical recording medium as set forth in claim 1,

$$T_{c1} \leq 240^{\circ}\text{C}.$$

wherein the first magnetic layer has a film thickness ranging from 20 nm to 80 nm.

wherein the Curie temperature T_{c2} of the second magnetic layer satisfies a condition

$$40^{\circ}\text{C} \leq T_{C2} \leq 220^{\circ}\text{C}.$$

wherein the second magnetic layer has a film thickness ranging from 2 nm to 80 nm.

wherein the Curie temperature T_{c3} of the third magnetic layer satisfies a condition

$$180^{\circ}\text{C} \leq T_{C3} \leq 300^{\circ}\text{C}.$$

11. The magneto-optical recording medium as set forth in claim 1,

wherein the third magnetic layer has a film thickness ranging from 5 nm to 80 nm.

12. A reproducing device for reproducing information from a magneto-optical recording medium including at least a first magnetic layer, a second magnetic layer and a third magnetic layer, which are layered in this order, the first magnetic layer being formed of a perpendicularly magnetized film having a relatively small wall coercivity and a relatively large wall mobility compared with the third magnetic layer in vicinity of a predetermined temperature, the magneto-optical recording medium satisfying conditions

$$T_{c2} < T_{comp1} < T_{c1} \text{ and}$$

$$T_{c2} < T_{comp1} < T_{c3}$$

where T_{comp1} is a compensation temperature of the first magnetic layer, T_{c1} , T_{c2} and T_{c3} are Curie temperatures of the first, second and third magnetic layers, respectively, said reproducing device comprising:

irradiating means for irradiating a light beam on the magneto-optical recording medium during reproduction; and

control means for controlling an irradiation intensity of the light beam to an intensity capable of heating the first magnetic layer of the magneto-optical recording medium to the compensation temperature or a higher temperature.

13. The reproducing device as set forth in claim 12,

wherein the compensation temperature T_{comp1} of the first magnetic layer satisfies a condition

$$160^{\circ}\text{C} \leq T_{comp1} \leq 260^{\circ}\text{C}$$

14. The reproducing device as set forth in claim 12,

wherein the wall coercivity of the first magnetic layer is not higher than 32 kA/m.

15. The reproducing device as set forth in claim 12,

wherein the magneto-optical recording medium satisfies a condition

$$40^{\circ}\text{C} \leq T_{c2} \leq T_{comp1} - 30^{\circ}\text{C}$$

where T_{comp1} is a compensation temperature of the first magnetic layer and T_{c2} is a Curie temperature of the second magnetic layer.

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16. The reproducing device as set forth in claim 12,

wherein the magneto-optical recording medium satisfies a condition

$$-20^{\circ}\text{C} \leq T_{\text{comp}3} \leq T_{\text{c}3}$$

where $T_{\text{comp}3}$ is a compensation temperature of the third magnetic layer and $T_{\text{c}3}$ is a Curie temperature of the third magnetic layer.

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